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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,208	04/04/2007	John A. Notaras	22216-00018-US1	6875
30678 7590 10/05/2009 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20006				
EXAMINER				
PALMER, TIFFANY				
ART UNIT		PAPER NUMBER		
4172				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/588,208

**Applicant(s)**

NOTARAS ET AL.

**Examiner**

TIFFANY PALMER

**Art Unit**

4172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF 298)  
Paper No(s)/Mail Date 7/18/2007
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Notaras et al (US Patent Number 3,855,976).

3. Regarding Claim 1, Notaras et al teach an air cooled internal combustion engine having a cylinder (Col 3, line 22-24), a rotary fan powered by said engine (Col 3, lines 8-9) and contained within a cowling (cover 4) (Col 3, lines 3-4) which directs a flow of air from said fan towards said cylinder, said air filter arrangement comprising a generally planar air filter (26 Figure 4) located in said flow, the improvement comprising locating said filter closely adjacent an air exit region of said fan to thereby increase the velocity of air flowing over said air filter (Col 1, lines 42-54).

4. Regarding Claim 2, Notaras et al teach an air cooled internal combustion engine wherein said air filter is located in a plane which is substantially parallel to the axis of rotation of said fan (9 Figure 2 and 26 Figure 3) and substantially parallel to a tangent to the outer circumference of said fan (9 Figure 2 and 26 Figure 3).

5. Regarding Claim 3, Notaras et al teach an air cooled internal combustion engine wherein said cowling (cover 4) is curved at least partially around said fan (4 Figure 1

and 9 Figure 2) and said air filter is located in a plane which is curved in like fashion to said cowling (26 Figure 3 and Col 3, lines 62-64).

6. Regarding Claim 4, Notaras et al teach an air cooled internal combustion engine wherein said air filter is located in a plane which is included into the flow of air leaving said air exit region (Col 4, lines 38-45 and Col 4, lines 60-65).

7. Regarding Claim 5, Notaras et al teach an air cooled internal combustion engine wherein said filter is generally rectangular (26 Figure 4) and has its longer axis substantially aligned with the direction of said air flow (Col 2, lines 28-31).

8. Regarding Claim 6, Notaras et al teach an air cooled internal combustion engine wherein said filter is substantially flush with said cowling (cover 4) (26 Figure 3).

9. Regarding Claim 7, Notaras et al teach an air filter arrangement for an internal combustion engine having a cylinder (Col 3, line 22-24), a rotary fan powered by said engine (Col 3, lines 8-9) and contained within a cowling (cover 4) (Col 3, lines 3-4) which directs a flow of air from said fan towards said cylinder, said air filter arrangement comprising a generally planar air filter (26 Figure 4) located in said flow and closely adjacent an air exit region of said fan to thereby increase the velocity of air flowing over said air filter (Col 1, lines 42-54).

10. Regarding Claim 8, Notaras et al teach an arrangement wherein said air filter is located in a plane which is substantially parallel to the axis of rotation of said fan (9 Figure 2 and 26 Figure 3) and also substantially parallel to a tangent to the outer circumference of said fan (9 Figure 2 and 26 Figure 3).

11. Regarding Claim 9, Notaras et al teach an arrangement wherein said cowling (cover 4) is curved at least partially around said fan (4 Figure 1 and 9 Figure 2) and said air filter is located in a plane which is curved in like fashion to said cowling (26 Figure 3 and Col 3, lines 62-64).
12. Regarding Claim 10, Notaras et al teach an arrangement wherein said air filter is located in a plane which is inclined into the flow of air leaving said air exit region (Col 4, lines 38-45 and Col 4, lines 60-65).
13. Regarding Claim 11, Notaras et al teach an arrangement wherein said filter is substantially flush with said cowling (cover 4) (26 Figure 3).
14. Regarding Claim 12, Notaras et al teach an arrangement wherein said filter is generally rectangular (26 Figure 4) and has its longer axis substantially aligned with the direction of said air flow (Col 2, lines 28-31).
15. Regarding Claim 13, Notaras et al teach an air cooled internal combustion engine wherein the air filter is positioned relative to the fan so that air exiting said air exit region of said fan passes over said air filter without changing direction (Figure 3 and Col 3, lines 37-44). Col 4, lines 62-65 define the arrows in the upper portion of Figure three as indication of the direction of flow of the air passing over the filter. The arrows show no indication of air flow changing directions.
16. Regarding Claim 14, Notaras et al teach an arrangement wherein the air filter is positioned relative to the fan so that air exiting said air exit region of said fan passes over said air filter without changing direction (Figure 3 and Col 3, lines 37-44). Col 4, lines 62-65 define the arrows in the upper portion of Figure three as indication of the

direction of flow of the air passing over the filter. The arrows show no indication of air flow changing directions.

### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Number 4,443,326 to Peiler discloses a self-cleaning screen for the cooling air inlet of an engine enclosure. US Patent Number 4,452,616 to Gillingham et al discloses an improved self cleaning air filter of the pulse jet type. US Patent Number 4,826,512 to Fuller et al discloses a self cleaning air filter including a tubular housing and an annular filter cartridge removably and rotatably supported in the tubular housing for use in internal combustion engines. US Patent Number 6,063,150 to Peter et al discloses a regenerable filter system. More specifically, the invention relates to the regenerable self cleaning filter system for removing carbon, lube oil and unburned fuel particulates from the exhaust of internal combustion engines.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIFFANY PALMER whose telephone number is (571)270-3666. The examiner can normally be reached on Monday-Friday 7:30am-5pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on (571)272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TNP

/Brian J. Sines/  
Supervisory Patent Examiner, Art Unit 4172